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REMARKS

Claims 1-6, 8-19, 22 and 24-39 are pending in this application. Claim 12 has been amended by this Amendment.

The Office Action dated April 4, 2005 objected to claim 12 because of informalities. The Office Action also rejected claims 1, 2, 5, 14, 19, 24-28, 38 and 39 as being anticipated by Deakin; and rejected claims 3, 4, 6, 8-13, 15-17, 22 and 29-37 as being obvious over Deakin further in view of Cobo.

Claim Amendments

Applicants have amended the claims merely to correct the informality noted in claim 12. Specifically, applicants have clarified that it is the second network element that is recited as sending an address in claim 12.

Anticipation Rejection

The grounds for the rejection of claims 1, 2, 5, 14, 19, 24-28, 38 and 39 as being anticipated by prior art is set forth in part 8 on pages 3-9 of the Office Action. Specifically, the rejection asserts that the claims are anticipated by the GSM/GPRS network shown in Figs. 1 and 2 of U.S. Patent No. 6,463,275 to Deakin (this network hereinafter referred to simply as "Deakin"). Applicants respectfully traverse the obviousness rejection on the grounds that it fails to establish a prima facie case that Deakin includes each and every one of the combination of features recited in the rejected claims.

For example, amended claim 1 is an independent claim directed to a method for coordinating charging information for both an application layer network and a transport layer network. A mobile station initiates connections, and a first network element generates a charging identification and sends it to a second network element. The charging identification is included in the call records of the first and second network elements and is used to coordinate charging information. The first network element is included in one of the transport layer network and the application layer network, and the second network element is included in the other network. Independent claim 24 is similar to claim 1 but is directed to a system instead of a method. Independent claims 38 and 39 are also similar, but are directed

¹ Although claim 18 is mentioned in the introduction of the rejection on page 3, it is apparent from page 5 in the body of the rejection that it is claim 19 that is rejected.

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to network elements.

Deakin is directed to a method of billing in a GSM/GPRS network that facilitates various types of billing, such as hot billing (real-time billing) and pre-paid billing, in addition to normal billing. Deakin proposes that a subscriber or subscription specific Billing Class Identifier (BCI) be implemented as a new parameter in the Home Location Register (HLR) and used by a charging gateway to direct billing information to the respective billing system (see, for example, Fig. 2 and col. 2, lines 27-43, and col. 3, lines 24-37).

Application Layer Network Connection

As mentioned above, the rejected claims recite that the mobile initiates a connection with an application layer network as well as a connection with a transport layer network. In the previous Office Action, it was acknowledged that the mobile in Deakin did not initiate both of these connections (see the last paragraph on page 6). However, the anticipation rejection now asserts that the mobile in Deakin initiates a first connection "between TE and GGSN" and a second connection "between TE and GGSN via SGSN", and refers to Fig. 7 and col. 4, lines 50-54, noting that the subscriber initiates "request service for connections".

It is well known that in GPRS networks, all connections between a Gateway GPRS Support Node (GGSN) and a mobile are made via the Serving GPRS Support Node (SGSN) serving that mobile. Thus, it is not correct to draw a distinction between two different mobile connections by saying that one of the connections are made via the SGSN. Also, even if the mobile in Deakin subscribes to two different services and thus may initiate requests for connections for the two different services, it still does not anticipate the claims which recite one connection in a transport layer network and another connection in an application layer network, rather than merely recite two different service connections.

Furthermore, Deakin is directed to only a GSM/GPRS network, which corresponds to a transport layer network, and does not appear to include an IP telephony network or any other type of application layer network. While a packet data network (PDN) is shown to be connected to the GPRS network, no information is provided about it and in particular no information is provided stating if or how the billing of the PDN is coordinated with the billing in the GPRS network. The billing method in Deakin occurs entirely within a GSM/GPRS transport layer network. Although the network may be connected to an external packet data network (PDN), there is no billing coordination between the PDN and the

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GSM/GPRS network. Thus, while the alleged first and second connections are confusing and in need of clarification, they do not appear to relate to an application layer network.

Generating and Sending Charging Identification

As mentioned above, the claims recite that a charging identification is generated in a network element of one network to the network element of another network. The rejection asserts that the Billing Class Identifier (BCI) in Deakin is such charging identification and is generated by the GGSN and SGSN. While there is a description at column 2, lines 38-43, and col. 4, lines 14-50, of the patent which mentions that the BCI is stored in the HLR, there is no indication that the GGSN or SGSN generates the BCI. Indeed, it is the Call Detail Records (CDRs) rather than the BCI that are generated by the GGSN or the SGSN (see col. 1, lines 58-63, and col. 3, lines 24-33, of the patent).

Furthermore, there is no indication that the BCI in Deakin, which is already stored in the HLR of the GPRS transport layer network when the connection is initiated, is sent to a network element in an application layer network. The BCI is sent from the HLR to the Charging Gateway Functionality (CGF), which is also in the transport layer network. There is no suggestion of sending the BCI in Deakin to the PDN or to any network element in an application layer network.

Coordinating Charging Information

In Deakin, the BCI is used to indicate a selected one of multiple billing systems in the GPRS transport layer network. The network element NE2 passes CDRs with BCI to a charging gateway, which directs CDRs based on the BCI to the respective billing system. The charging gateway thus uses the BCI to determine whether the billing information is sent to billing system A, B or C. The BCI is not used to coordinate charging information between the transport layer network and the application layer network as recited in the rejected claims.

Dependent Claim 28

Claim 28 is a dependent claims reciting the additional limitation that the second network element to which the charging identification is sent comprises a Call State Control Function (CSCF). Whereas the previous Office Action acknowledged that Deakin did not even include a CSCF (see the bottom of page 32), it is now asserted that the charging

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gateway functionality (CGF) in Deakin is a CSCF. It can be easily determined that the assertion is incorrect by referring to the discussion of a CSCF in the background of this application or in U.S. Patent No. 6,574,201.

Obviousness Rejection – Deakin & Cobo

The grounds for the obviousness rejection of claims 3, 4, 6, 8-13, 15-17, 22 and 29-37 is set forth in part 9 on pages 10-22 of the Office Action. Specifically, the claims are rejected as being obvious over Deakin further in view of U.S. Patent No. 6,496,690 to Cobo.

Applicants respectfully traverse the obviousness rejections on the grounds that it does not establish a prima facie case that one of ordinary skill in the art would combine the two applied references to arrive at the claimed invention in the manner proposed in the rejection.

Independent claim 33 recites that the mobile station receives charging identification from a first network element in one of the transport layer network or application layer network, and sends the charging identification to a second network element in the other one of the transport layer network and application layer network. Claims 3, 4, 8, 10-12 and 35 further recite that the address of the first network element or security information is sent together with said charging identification to the second network element. In addition to the reasons set forth above with respect to the anticipation rejection, applicants respectfully submit that Cobo does not suggest a modification that includes the features of the rejected claims.

The rejection relies upon the Create PDP context request and response messages shown in Fig. 4 and discussed at col. 7, lines 44-67, of Cobo. However, the prepaid subscriber class (PPSC) is passed between the SGSN 12 and GGSN 25 in Cobo. There is no indication that the mobile terminal in Cobo receives charging information, or that the mobile terminal sends the charging information to another network element. There is also no indication that the address of security information is sent by the mobile in Cobo.

Claim 30

With respect to dependent claim 30, the obviousness rejection appears to assert that Cobo discloses a GGSN in an application layer network. This assertion is incorrect. The GGSN in Cobo is not sent charging identification as recited in the claim and is not located in an application layer network.

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Claim 18

Although the Office Action Summary indicates that claim 18 is rejected, the Office Action in fact contains no grounds of rejection for claim 18. Applicants respectfully submit that claim 18 is allowable and requests that the reasons for the rejection of claim 18 be clearly stated if there is another Office Action in this application.

Conclusion

Applicants traverse the rejections for at least the reasons given above and respectfully request a Notice of Allowance. Please charge any fees due in connection with the filing of this Preliminary Amendment, to Deposit Account No. 02-4270 (Dkt. No. NOKIA.30US) and please credit any overpayment or excess fees to such deposit account.

Respectfully submitted,



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